UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10 LABORATORY SERVICES AND SCIENCE DIVISION
RISK EVALUATION BRANCH
1200 6th Ave #155, Seattle, WA 98101

May 28, 2021

MEMORANDUM

SUBJECT: Comments for Taylor Lumber Site

FROM: Don Clabaugh, PE

TO: Pat Hickey, Remedial Project Manager

Per your request for technical support, the following comments for Taylor Lumber site are provided for your consideration. Documents reviewed include the 2005 ROD, the 2017 Five Year Review and the 2016 Groundwater Monitoring Report. If you have any questions or would like to discuss these matters further, please contact me at your convenience.

The 2016 Groundwater Monitoring Report, prepared by APEX, includes the only potentiometric surface map that was reviewed for this evaluation. The report states the following.

''A groundwater elevation contour map is provided on Figure 3. Groundwater flow observed at the site during the April 2016 monitoring event is from the northwest to southeast (towards the South Yamhill River) and is consistent with historical documentation of groundwater flow direction (CMH2MHill, 2003; Apex, 2012). The groundwater contour map on Figure 3 depicts a depression in the groundwater flow path that coincides with the perimeter of the barrier wall. Within the barrier wall, groundwater elevations are between 5 and 10 feet lower than the surrounding area as groundwater is being actively extracted from within the barrier wall. Within the barrier wall, the groundwater flow direction is not consistent with regional flow, which suggests that groundwater extraction from within the barrier wall has successfully produced an isolated inward gradient."

Contrary to the statement above, the potentiometric surface map (Figure 3) does not depict a depression in the groundwater flow path.

- There are no measurements of groundwater elevation northwest of the "barrier wall".
- There are no measurements of groundwater elevation in monitoring wells within the "barrier wall". Note that water level measurements from pumping wells are not accurate measures of groundwater elevation unless the well efficiency and drawdown cone of depression are known.
- Contour lines of groundwater elevation outside of the "barrier wall" are perpendicular to the "barrier wall", but contour lines within the "barrier wall" are not perpendicular and suggest groundwater flow from the inside of containment out.

Based on the information available to review it cannot be concluded that the barrier wall has isolated contaminated groundwater.

To provide sufficient information on groundwater flow within and around the soil-bentonite containment wall the following information will be needed.

- Monitoring well boring logs and as-built completion information;
- Water levels in monitoring wells within and outside the wall; and,
- Pumping rate of the extraction wells within the wall.

A synoptic measure of the surface water elevation in the river also would be useful.

Note that prior to measuring water levels or sampling the wells they should be evaluated for hydraulic response with the aquifer. Standard methods would include measurement of the bottom of the well to determine whether sediment has accumulated and slug testing to determine if hydraulic recovery occurs quickly.

Note that the 2016 sampling event used low-flow purging with the pump intake only 2-ft below the water level, which is not appropriate for dissolved constituents emanating from dense non-aqueous phase liquid such as pentachlorphenol. The Sampling and Analysis Plan should be revised for the contaminant of concern.